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PSYCHOLOGY AND SCIENTIFIC METHODS

OF SIMPLER AND MORE COMPLEX CONSCIOUSNESSES

I.

1. In an article already published in this JOURNAL[1] I have suggested that if the relation between human consciousness and the activity of man's nervous system is properly considered it may well be held that there is a thoroughgoing neururgic and noetic correspondence, *i. e.*, that all nervous activities correspond with psychic modifications of some sort, which may be sufficiently emphatic to appear in the field of attention, but which, if not thus emphatic, have their place in a broad undifferentiable psychic mass against which the field of attention is contrasted, which psychic mass I have called the field of inattention.

If we hold this to be true we at once find ourselves avoiding a difficulty which leads to great confusion in the writings of students of comparative psychology.

Assuming, as we usually do, that certain of our own nervous activities are unconscious, we not unnaturally argue that the activities of animals which display the characteristics of these particular so-called unconscious activities of our own are unconscious also. But the attempt to interpret the nature of animal behavior in this manner has led to so much controversy that it has resulted in the conviction among many biologists that no satisfactory objective mark of the existence of animal consciousness can ever be gained.[2]

The only basis any one of us has for the conviction that other men are conscious is an interpretation of other men's activities in terms of his own conscious experience. Our fellow men in truth tell us of their mental states, but their words would have no meaning for us did we not assume in them mental states corresponding with such of our own as we would describe in their language. We introject consciousness into them, as it were, as the result of a mere argument by analogy. And if we do this with our fellow men we

[1] 'Of Neururgic and Noetic Correspondences.' June 9, 1904.
[2] Cf. Edward Claparède, *International Quarterly*, December, 1903.

are equally warranted in going beyond this and assuming the existence of consciousness in correspondence with activities of animals very like ourselves, as the vast mass of learned and unlearned men constantly do.

The difficulties of interpretation on the basis of this argument by analogy still remain, however, so long as we hold that any of our activities are unconscious, but these disappear entirely if we accept the hypothesis here upheld; for then we are led to see that a consciousness of some form must exist wherever we discover an animal in which we find a closed nervous system. We must agree of course that as these nervous systems of the animals are simpler than our own, so the corresponding consciousness must be simpler than ours; and where the simplicity becomes very marked we must agree that the consciousness must correspondingly be so simple as to be difficult of interpretation in terms of our adult experience. Nevertheless, we can not blind ourselves to the fact that our own nervous systems at certain early periods of our development were fairly correspondent with the fully developed nervous systems of some of the lower animals, and we are warranted, therefore, in ascribing to these animals forms of consciousness quite comparable with the consciousnesses of the infant newly born, or in the early stages of its development.

2. This thought gains very greatly in interest in connection with our conception of the human nervous system as a highly complex system of nervous systems, to which consciousness, a highly complex system of psychic systems, corresponds. For we find within the human body certain minor nervous systems which correspond in complexity more or less closely with the whole fully formed nervous systems of certain of the lower animals which we must hold to be conscious beings. And this would lead to the suggestion that if these minor nervous systems within the whole human nervous system could persist as such, and yet be disconnected from the mass of the nervous system as a whole, they would be what we call closed nervous systems relatively independent and individual, and yet within the human body; and under our hypothesis these minor nervous systems as such would have minor consciousnesses corresponding with their activities.

But it is clear that such minor nervous systems in man do often persist as such although they are placed out of relation with the mass of the nervous system taken as a whole. This may be due to pathological lesions or to the use of the surgeon's knife; or it may result from what we may call incommensurability between the activities of the minor system, and of the mass of the system taken as a whole. And when it occurs we seem compelled to agree

that the disconnected minor nervous system has corresponding with its activities a little consciousness all its own.

We are thus led to see that it is quite possible to conceive that human consciousness is subject to the dissociation of minor psychic systems to a wide extent, so that we are justified in describing a human consciousness as a bundle of closely related minor consciousnesses, the most complex of which (corresponding with the activities in the brain) normally appears as preeminent.

3. But if we go thus far we are naturally led to take a further step; for we conceive of the minor nervous systems of the lowest order to be composed of what we call nervous elements; and if we conceive any such nervous element to be cut out of relationship with all others, still remaining alive, it would still remain an active neural entity; and it is difficult to see how we can refrain from assuming the existence of something psychically elemental corresponding with such a neural element's activities. Such psychic elements could not be consciousnesses, for they are conceived as elemental while consciousness is essentially systemic; but it is easy to see that they might well be now attached to, and again dissociated from, psychic systems, and that as the result a given consciousness might thus be now broadened and again narrowed.

4. If we accept this conclusion we are led to note that we commonly assume that so special a significance is to be given to the activities of the nervous system in man's organism that it alone is to be considered of moment in the relations of correspondence with consciousness. But our modern biologists are teaching us that all protoplasmic matter has powers of interaction, of 'conductivity,' similar to those observed in nervous tissue. It seems possible to hold then that while the consciousness with which we are familiar may be *practically* correspondent only with transfers of energy within the nervous system; nevertheless it may be that any transfer of energy in protoplasmic matter may have a psychic coincident.

This would lead us to hold that consciousnesses of a lowly grade may exist in living bodies which are systematized and yet without nervous system; and that plant consciousnesses of a sluggish type, which Fechner and many others have considered possible, may not improbably exist.

But beyond this we see in this view indications that human consciousness may not improbably be complicated by the existence of psychic correspondents of transfers of energy in other protoplasmic matter than that which we describe as nervous tissue; although it must of course be granted that the very superior 'conductivity' of this nervous tissue makes the part of human consciousness which corresponds with the activities of the nervous system vastly more

important than all the rest of the psychic correspondents of activities in protoplasm other than this nervous tissue. Under such a view human consciousness is not only the correspondent of activities in the cortex of the brain; nor only the correspondent of the activities of the nervous system as a whole; but is the psychic throb, so to speak, which corresponds with the whole throb of the activities in the man's living physical system.

II.

5. Turning now from the consideration of the nature of consciousnesses simpler than our own, the existence of which we all acknowledge, let us ask whether the hypotheses with which we are here concerned, if valid, throw any light upon the question whether there exist in the Universe forms of consciousness more complex than human consciousness.

Within the human nervous system, to the activities in which man's consciousness is supposed to correspond, are discovered, as we have seen, an indefinite number of minor systems within systems; and these minor systems resemble in general nature the broad system of which they are integral parts. It is naturally suggested then that if human nervous systems could themselves be related together, after the manner of the minor nervous systems within the whole nervous system, we should have a broader organism; and that corresponding with the same there might exist a broader consciousness than human consciousness, in which our individual consciousnesses would be minor psychic systems.

We appear thus to reach a suggestion in line with the common notion that the 'social body' is organic in its nature; and that there is a 'social consciousness' corresponding therewith.

So much careless thinking has been indulged in by those who have made use of these conceptions, that they have naturally become discredited; but it seems to me that the argument by analogy which we so constantly use in reference to other human and animal minds, and which we find so valuable in practical life, in connection with the fact that our nervous system is a complex system of minor systems, must lead us to pause before we reject these conceptions.[3]

[3] For a fuller discussion of this subject *confer* my 'Instinct and Reason,' p. 189 ff. The most obvious basis of objection to the notion of the existence of an organically related 'social body,' is that individual men display closed nervous systems, *i. e.*, that they are isolated entities; while the minor systems in the larger nervous system are intimately connected physically, and thoroughly 'integrated.'

But if we inquire into the nature of this close connection and 'integration' within the minor systems of the human nervous system, we are compelled to acknowledge in the first place that they vary greatly in degree in the different

6. But if we allow ourselves to consider such views as the above, we are surely led to surmise, as many important thinkers before our day have done, that not merely such transfers of energy as occur in protoplasmic matter may have corresponding psychic effects, but that all transfers of energy in the universe, whether in living or non-living bodies, may have corresponding psychic effects; and that all together may form a 'Universal Consciousness' corresponding with the system of the physical universe.

Such a notion is as old in germ as Greek philosophy, and has from time to time been revived and developed by the moderns, notably by Fechner. But it has never been treated very seriously by the philosophical world; having been taken rather as a fanciful and poetical conception of no philosophic import. With our newly gained knowledge of the physical basis of human consciousness, however, it seems to me that this conception deserves to be given great weight.

If we consider the universe as a whole, as inclusive both of

minor nervous systems thus related. And when we ask what we mean by integration we find ourselves able merely to assert that the minor systems are spatially contiguous, which contiguity is of course a relative matter; and that they are reciprocally reactive, *i. e.*, that no emphasis of activity in one minor system can be altogether without effect upon all the other minor systems with which it is 'integrated,' nor can its activity be unaffected by the existing activities of all these related minor systems.

Now it is true that individual men when viewed objectively seem to be isolated individuals, but we must confess that in thus describing them we speak relatively. They are in a sense contiguous, and they are related to one another in ways mysterious; but the relation between contiguous minor nervous systems is surely no less mysterious. Beyond this, so far as individual men are related they display directly or indirectly a reciprocity of efficiency of reaction; and may thus be held to display the signs of 'integration.'

And if we turn to the subjective view; it is true that we usually speak of ourselves as if we were thoroughly isolated psychic atoms, as it were; but the late studies of the nature of the self of experience by men like Professor Royce have surely brought to us convincing evidence that even our conception of our own selfhood is inextricably inter-twined with our realization of the existence of other selves.

To the above may be added a second objection; viz., that the relations between human beings which may be claimed to be of organic form, are constantly changing; that, as Professor Sidgwick put it, individual men readily shift their allegiance from one social group to another, and may actually belong to diverse social groups at one and the same time.

But evidently if a social body exists it must be very loosely integrated, and we should therefore expect to find its minor systems 'shifting their allegiance' from one social organically related group to another. Nor is it difficult under our view to conceive that a given human individual minor psychic system might at the same time be part and parcel of very diverse broader social minor psychic system; these diverse broader social minor psychic systems forming a still broader organic whole or social consciousness.

what we usually call the inorganic and the organic, we perceive that it may be looked upon as a vast organic system. In it, as in the human nervous system, are various parts which are more or less complex minor systems within wider systems. Broadly speaking all parts of this vast system are related by a direct or derivative contiguity; and they are subject to a thorough reciprocity of reaction, so that no element can react without in some measure affecting the activities of all other parts of the vast system, nor can the element's reaction be what it is except for influences upon it from all other parts.

If then it be assumed that a psychic somewhat corresponds with each transfer of energy within this universe, we must hold that there exists a Universal Consciousness in which our human consciousnesses are minor psychic systems related with all sorts and kinds of like and diverse minor psychic systems.

7. If then the analogy with the structure of the human nervous system and the corresponding human consciousness is to be carried out, it would appear that there must be in this universe an enormous variety of minor consciousnesses corresponding with the enormous variety of types of physical systematization in this universe. These consciousnesses must vary in breadth and complexity; and as certain minor systems within the whole vast physical system must be more closely systematized than others; so certain of these minor consciousnesses must be more closely systematized than others;—must appear as more nearly closed systems;—as more self contained,—as more individual,—than others.

Human consciousnesses would, in this view, be special forms of such closely systematized,—self-contained,—individual,—psychic systems.

Any individual thing would thus appear to be merely a special minor system within a broader system, which minor system is at the time considered in and for itself, without relation to any broader system to which it may belong. In fact under this view we can never mean more than this when we think of any individual thing, which is for us but a bundle of what we call activities, which are in fact merely emphatic activities within minor systems, which latter, if we take a wider view, are merely emphases of activity in minor systematized parts of broader active systems.

What we describe as an individual man would thus appear to be merely a special minor physical system within a broader physical system, which minor physical system we at the time consider in and for itself; and correspondingly each individual consciousness would thus also appear to be merely a special minor psychic system within a broader psychic system, which minor psychic system we

at the time consider in and for itself. An individual consciousness would thus appear merely as an emphasis within a minor psychic system which is itself within a wider psychic system, without which it could not exist.

8. We have thus seen that it is possible to conceive that in this universe there exist innumerable grades of consciousnesses other than human consciousnesses. As Professor Royce[4] puts it "we have no right whatever to speak of really unconscious Nature, but only of uncommunicative Nature, or of Nature whose mental processes go on at such different time-rates from ours that we cannot adjust ourselves to a live appreciation of their inward fluency, although our consciousness does make us aware of their presence. My [Professor Royce's] hypothesis is that, in the case of Nature in general, as in the case of the particular portions of Nature known as our fellow-men, we are dealing with phenomenal signs of a vast conscious process, whose relation to Time varies vastly, but whose general characteristics are throughout the same. From this point of view, evolution would be a series of processes suggesting to us various degrees and types of conscious processes. These processes, in case of so-called inorganic matter, are very remote from us; while in the case of the processes which appear to us as the expressive movements of the bodies of our human fellows, they are so near to our own inner processes that we understand what they mean. I suppose, then, that when you deal with Nature, you deal with a vast realm of finite consciousness of which your own is at once a part and an example."

9. If such innumerable grades of consciousnesses exist corresponding with innumerable grades of physical embodiment, then at times human consciousnesses may become inherent parts of such other forms of consciousness broader than our own. Then although we, as minor psychic systems, could not be said to 'know' the consciousness in which we inhere, we might expect to appreciate a difference of what Doctor James might call our 'feel,' as the result of this inherence. That we often do seem to appreciate that we are swayed by far-reaching, but ill-defined, influences broader than ourselves can not be questioned, although we experience mainly the effects due to what may be a breaking away from these influences.

As Lowell put it in his 'Under the Willows,'

> "But suddenly the sound of human voice
> Or footfall, like the drop a chemist pours,
> Doth in spacious cloud precipitate
> The consciousness that seemed but now dissolved
> Into an essence rarer than its own,—
> And I am *narrowed* to myself once more."

[4] "World and Individual," II., p. 225 ff.

10. If such other forms of consciousness exist in the universe, not only may we at times, as we have just seen, become inherent parts of some of those of higher grade than ours; but it is also possible that at other times such diverse consciousnesses may merely attach themselves to ours, as it were, leaving our own consciousnesses essentially intact; but in such cases the other consciousnesses may serve to produce emphases in our own consciousnesses, within the field of attention, which may point to influences from without such human consciousnesses as are familiar to us.

And in my view it is to the existence of such forms of consciousness that the evidence emphasized by Myers points; so far as it points to anything.

In his 'Varieties of Religious Experiences,'[5] Professor James, in referring to some early experiments of his own, says "One conclusion was forced upon my mind at that time, and my impression of its truth has ever since remained unshaken. It is that our normal waking consciousness, rational consciousness as we call it, is but one special type of consciousness, whilst all about it, parted from it by the filmiest of screens, there lie potential forms of consciousness entirely different. We may go through life without suspecting their existence; but apply the requisite stimulus, and at a touch they are there in all their completeness, definite types of mentality and adaptation. No account of the universe in its totality can be final which leaves these other forms of consciousness quite disregarded."

But if all this is true it can not be held that such experiences of ours point to the existence of 'dissembodied spirits'; rather does it point to other than human forms of consciousness, and consciousnesses differently embodied, forms of consciousness so differently embodied in fact that in the words of Professor Royce quoted above, 'we can not adjust ourselves to a live appreciation of their inward fluency.'

HENRY RUTGERS MARSHALL.

NEW YORK CITY.

THE DYNAMIC CONCEPT OF THE INDIVIDUAL

PERHAPS no philosophical concept presents greater difficulties to the dynamic realist than that of individual existence. If monism be consistently genetic and uncompromisingly dynamic, the fact that the world presents itself to us in the form of units of experience is not as self-evident as to common sense it might appear.[1]

[5] P. 388.

[1] Strong, in his 'Why the Mind has a Body,' very pertinently says of 'things-in-themselves': "If by 'things-in-themselves' we understand realities not only not immediately knowable to us, but unknown to any one, unexplained

On the other hand, it is not a defect that can be attributed to realism alone. It is certain that idealism meets the same difficulty in aggravated form and materialism breaks down logically either by ignoring the necessity for a nexus between its units or by reason of an ambiguous postulate for supplying it.

The three fundamental categories or forms of thinking, mode, space and time, afford us the 'this-now-here' of experience and the essential of each of these is a continuum broken into units. Neither time nor space could ever be presented if they were unbroken, and difference or change is essential to modality. But the 'this-now-here' characterizes the psychic, as contrasted to the psychological —the real in experience as contrasted to the real in recollection, or the 'that-then-there.'

The difficulty 'of assigning to non-empirical existences a nature, or accounting for our knowledge of them, if assumed,' referred to by Dr. Strong, is removed by dynamic realism by rejecting not only the limitations of phenomenalism, which, as this author points out, 'makes no provision for the knowledge of the minds of other men and animals,' but by avoiding the other extreme which ignores the primacy of experience.[2]

But, as Professor James says, 'our finiteness and limitations seem to be our personal essence' ('Human Immortality,' p. 29). If the dynamic view that creation is the self-limitation of energy be correct, it follows that all reality is individualized. The subjectivity

even by themselves, antithetical to consciousness and quasi-material in their nature—in short, unknowable, undefinable *x*—their irrationality and absurdity can not be too freely admitted."

[2] It may be noted here that Dr. Strong's argument that, because we *do* know other minds when we theoretically are impotent to do so, there is proof of 'transcendence' in our thinking seems to the writer to rest on the fallacy of failing to distinguish the psychic and the psychical (though this distinction is often made in the work). We do not *experience* other minds when we posit consciousness in them. But neither do we experience our logical processes as such when applied to the immediate data of our own experience. To us the operations of other minds are not real, but they may be as true as any kind of knowledge whatever. The source of our information is indirect, but so is that of objective changes in general. We know of them by information and construe them by analogy. We can no more deny the validity of the statement, 'I feel sad,' than the other made by the same person, 'I see a light.' Of course the ultimate validity rests on the law of coherence in both cases, but is that what Professor Strong means by 'transcendence' and instinctive knowledge? Perhaps his cosmological proof of 'things-in-themselves' can be construed to be an expression of the law of coherence or congruousness. "Things-in-themselves must be assumed to fill the gaps between individual minds, and give coherence and intelligibility to our conception of the universe." To his physiological proof we demur; it is not true that 'our perceptions are preceded and conditioned by physiological events, and that this marks them off as effects.' This is, we think, far too naïve a conception.

involved in realizing affords the sole relation on which individuality can be based. This is the relation to the subject. In a very true sense all individuality is created by me. The validity of the individual is precisely that of reality in general. Spontaneity and resistance are the parents of a universe of individuals, but they can come to realization only in an individual percipient.

To admit that one can not comprehend self-limitation is not difficult in a field where so little can be understood, but this is as intelligible as any conception of the origin of the cosmos and at least avoids the usual logical errors.

When we analyze our judgments which create for us units of various orders, such as individuals, species, genera, etc., we are forced to admit an equal validity for all these categories. That is to say, that, considered as a matter of pure reflection, an individual is only a group of more or less arbitrarily assembled characters (activities), while we can but believe that the link that binds these also binds in the same group many other activities which we do not now know directly, though we may go on to discover them. We may admit that if it were possible for us to gather all these activities into the focus of our thinking there would be no individualizing. Royce has shown in various places that the attempt to create individuals by assembling properties that shall possess the uniqueness necessary to individuality must ever fail. Still the erratic granite boulder a hundred miles from its source and the human babe, we feel sure, are individuals.

The individual has the advantage over the species or genus in that it is unique by virtue, not of its supposed qualities or energic forms, but of its relations to me as a percipent. Realities of that immediate and compelling sort which direct experience alone can produce are attached to individuals but not to species. A species is created by recognizing bonds or relations between qualities in thought. A species may be true, but it is not, in our sense, real. The individualizing moment is not any combination or relation of qualities, but the reality growing out of relation to the subject. The individual may not be true, even, as a product of judgment, but the defects of judgment do not affect the elements of reality contained. The validity of the concept of individuality is bound up with that of reality and is inseparable from the ground of all knowledge.

Realism has no difficulty with the bare concept of individuality, which rests, as we repeat, on the same criterion of congruousness as reality. The *content* of the individual, *i. e.*, the dynamic element, will be admitted, but the validity of the limitations which make it individual may be denied in so far that the right to ascribe to the

limitations, set up by the subject, objective validity is called in question. If the child fill his pint cup repeatedly from the ocean are the several cupfuls individuals? Here again the genetic law of congruousness must be called in. Our minds are integral parts of an organism—the universe. The laws of activity which our minds present have grown up genetically with all the activities of the world. There is an evolutionary relation between the energy of my thinking and the energic forms of the external world, therefore relations established in one sphere correspond in some way to relations existing among the other class of elements. By this means the dynamic school escapes the weakness pointed out by W. H. Sheldon in the recent writings of the so-called 'pragmatic' or Chicago school when he says: "The empirical method with which pragmatism sets out is indeed the only correct one, but it has abandoned this method. . . . Pragmatism in neglecting the analytic study of these categories (permanent reality, causation) is narrow and unphilosophical."[3]

We create objects by thinking properties into relations, but the fact that they are thought together thus and not otherwise is evidence that some special bond or relationship actually exists in the energic complex designed as an individual. It might be that another kind or stage of being would carve other individuals out of the same groups of properties, and these would be true for him. There would be an 'external' correspondence—true relationship, in this case also. For example, a man may be at one time most impressed with his own bodily worth and be willing 'to give everything he hath for his life,' while at another time the subordination of self to the claims of a higher unit—say society—may lead him to sacrifice all to the ideal of the new sphere of self-preservation. Again, a crystal may prove to be composed of thousands of exactly similar component crystals and a plant may be divisible into an indefinite multitude of integral units.

As philosophers, then, we may admit with the idealists that, objectively speaking, individualization is purposive, a teleological abstraction, but practically to us each this teleological fragment is a real which is also real to our neighbor to the exact extent to which he resembles me, though it will not be exactly the same to him as to me.[4]

[3] *Journ. Psych., Philos. Sci. Method.*, I., 4, p. 105. James likewise laments the "great gaps in that system. . . . There is no cosmology, no positive account of the order of physical fact as contrasted with mental fact, and no account of the fact that different subjects share a common object-world." ('The Chicago School,' *Psych. Bull.*, Vol. I., No. I.)

[4] The idealistic view is briefly but adequately set forth, for example, in Professor Royce's 'Conceptions of Immortality.' "The very conception, then, of an individual as a real being, precisely because it is no abstract conception

We may rest secure in the belief that the algebraic terms we employ retain their correspondence to the objective facts throughout all the permutations of our problem, provided our methods are not erroneous and that our answer, when the necessary substitutions are made, will possess objective validity. We deal with our x, y, z and are content to call them *real*, but we can never know their dynamic counterparts, apart from their effects on us, until our limitations drop away. The idealist deals with the signs for multiplication and division and finds his warrant for reality in these evidences of purpose. The dynamic realist accepts both as representative of the flux of continuous but modalized energy forming part of a universe of teleological activity which validates the categories alike of reality and of truth.

The above considerations bring us to the possibility of a realm where the laws of our thinking do not prevail. This is the land of the absolute. The absolute,[5] we are told, is unlimited, unrelated and unconditioned; it is uncaused, and within its realm there is no cause. It is, moreover, entire, complete, perfect. Such are its claims. Let us examine them. If unrelated it can not exist in the same universe with related things. One of the first things that strikes us in this connection is that it stands in relation (of opposition) to all things we know. As Hegel showed *ad nauseatum*, pure-being, that is absolute, unrelated being, is the same as non-being, *i. e.*, does not exist. 'To conceive nothing is the same as not to conceive at all' (*Malebranche*). Much the same result is reached if we examine the word 'unlimited.' If unlimited, it would include the facts of relative being to which it is proposed to oppose it.

The descriptive terms of the second class, in so far as they are not negations in positive form, make it necessary to include as valid in them whatever is valid at all. If the absolute is the perfect, entire, complete being, then such segments as may appear in our experience are also included in its own validity, for if the universe be perfect, the conclusions valid in partial experience must possess some kind of validity for the whole.

We conclude, therefore, that the reality of our experience is not destroyed by appeal to a name for a negation, as such impossible. Again, although the reality implied by *our* union of objective and subjective in experience might appear very different to an absolute, *i. e.*, a perfect Being, still it would be real for us. Moreover, if He

but is rather the conception of a unique being, is one that no pure thought or experience can express, but is a conception expressible only in terms of a *satisfied will*. . . . I conclude, then, so far, that if this world contains individuals at all it is a teleological world." (Loc. cit., p. 48.)

[5] 'Universal' is a word better suited to the purposes of this discussion.

were a perfect and complete being His being would include the relative reality as part of His own absolute reality. A totally misleading universe would be an impossible universe.

Properly conceived, the relation between relative and absolute is not one of negation, but that existing between the parts and the whole in which they subsist.

But the notion of relation has a deeper significance. While it is true that reality in terms of experience reduces to an affirmation (subjective) of attribute (objective) and that the attribute is always a 'doing' or activity, yet, philosophically, the reality is incomplete unless there is included an *End* or purpose—a link to other reality. This 'Endzweck,' to use a German word most nearly answering our purpose, is inherent in all activity and is that which connects this particular doing with all other doing into an organic system. Unrelated reality is impossible.

These are difficult ideas. One might illustrate by the white corpuscles in human blood. Viewed singly they perform their functions as independent organisms, but they are quite unintelligible until these functions are perceived in relation to the sustenance and preservation of the body at large. The life of an individual is unintelligible until considered in relation to its antecedents and subsequents. The atom or ion or electron is non-existent except in so far as it is related to others. Lotze was right in saying that reality means 'standing in relation.' Relativity is the philosophical construction of reality. This conception involves the necessary counterpart—that of the absolute, that system or organization (organism) in which all being finds its relation. If the absolute be contrasted to the relative, this is by comprehending and so fulfilling it.

The distinctions which have been made involve the use of words that have been employed in different and even opposite senses during the history of philosophy, but we may simplify matters by starting out from the statement that reality consists in standing in relation and that this relation is dynamic. Realities are not simply thought together; they work together. Action and reaction is another way of defining standing in relation. Now if one of the elements of reality is always an active self, as in experience it always is, then we call self, subject, and the other element of reality, object. (Popular language retains evidence of the fact that formerly the two terms were used the other way about, but this need not disturb the present philosophical usage.)

The union of the two—the affirming by me of an attribute—constitutes our *realization*. Moreover, in more complicated thinking we may recognize the objectivity of attributes as related to other subjects than ourselves and so arrive at an objective universe.

In this case the many subjects fuse into an absolute subject, the totality of all affirmation as objective to which the attribute exists. Thus we apparently divorce the attribute from exclusive relation to the self of experience and form a higher type of reality, a being of absolute affirmation—of independent existence. We are no longer obliged to think of the external world as dependent on our affirmation of it, but as being once for all absolutely affirmed or valid to all possible subjects.

Here, as before, reality is the union of objective (attribute) and subject (affirmation), but now the subject is not self, but the absolute. Something like this is perhaps what Martineau meant by speaking of matter as something objective to God. But we are not yet speaking of matter. It is easy to see that subjective and objective may be used for either member interchangeably.

Hegel declares that 'the antithesis of subject and object arises originally in the thinking activity, and that we are compelled to postulate a world in antithesis to the thinking subject, not by any power perceived by the senses and forcing itself in from the outside, nor by any necessity set over against thought, but simply by the nature of thought itself' (*Eucken*).

Having traced the origin of an ideal objectivity freed even from dependence upon the single self as subject in experience, it is futile to inquire as to the validity of this objective independence. It is valid as our creation and has all the validity that anything can have for us. Practically we are usually more ready to doubt the existence of our subjectivity than the objective world of attribute presented from without. But if reality is standing in relation, and perceiving (creation) of relation is the function of mind, then we must accept both elements in reality. Mind must have faith in itself or all progress is at an end.

C. L. HERRICK.

SOCORRO, NEW MEXICO.

DISCUSSION

A REPLY TO DOCTOR HOLT

I TAKE this occasion to thank Doctor Edwin B. Holt for his very kind criticism[1] of my article[2] on 'Time-Perception' and to answer as best I may the more important of his objections.

1. Doctor Holt urges that the ratio of the change in an element of a psychosis to the change thereby induced in the psychosis as a

[1] See No. 12 of this JOURNAL.

[2] *American Journal of Psychology*, January, 1904.

whole (a ratio which I symbolize by $\frac{do}{ds}$, and advocate as the measure and representative of the specious present), 'is already a second derivative,' from which it would follow that, when the rate of change was constant, the specious present would be zero. My critic supports this objection by the following statement: "An amount of change is always an amount of change in a certain amount of time, that is a *rate of change.*" But why Doctor Holt should thus identify a change, or alteration, with the rate at which the change or alteration takes place, I am at a loss to imagine. We do not identify distance with velocity, or velocity with acceleration. The amount of change is equal to the continuously acquired difference between the earlier and later states of a thing. The change from an egg to a chicken would be the same in amount (though not in rate) whether it occurred in a few weeks or a few years. And this for the same reason that a mile journey is a mile journey, whether it takes a year or a minute.

2. Along with the above, the critic urges another and far more vital objection. 'Change can not be defined without reference to time,' he says, from which would seem to follow the impossibility of making the specious present, or amount of time perceived at any moment, depend upon the ratio of the objective and subjective changes occurring in that time. And later on in his review (p. 322), evidently having this same objection in mind, he says, 'Now I submit that the specious present is not a rate of change . . . it does not mean to us any rate of change or the like.' To all of which I answer that the fact that change presupposes time does not imply that it presupposes any given amount of time, and that it is in no way incompatible with the view that the amount of time occupied by a change is always and inevitably measured by the reference of that change to a contemporaneous standard change. In the external world, the standard change is the rotation of the hands of a clock, or the rotation of the earth. In the internal world of immediate experience, it is the change in our psychosis which is produced by, and concomitant with, the change in any one of its distinguishable elements. Indeterminate time (like indeterminate space) may be objective and absolute, real and prior to all change; but definite durations, or *amounts* of time (like amounts of space), are subjective and relative, presupposing, and not presupposed by, the changes (or bodies) which fill them. This general conception of the relativity, and dependence upon their contents, of all time- and space-magnitudes, to which Doctor Holt does not refer, was given as a *lemma* in the second section of my paper, and constitutes the justification for that interpretation of the specious present to which he objects.

3. Doctor Holt further urges that I take no account of the contents which are continually passing out of the psychosis. I do not, indeed, take account of the contents which have passed out of consciousness, but I take account of the effect which their passing out has upon the states that remain; which effect is precisely what we should expect, namely, a diminishing of the psychosis, which normally produces a decrease in the ratio $\frac{do}{ds}$ or a contraction of the specious present. It is a matter of observation that when experiences are constantly dropping out of consciousness the specious present is short, while, on the other hand, the more cumulative an experience is the longer is its time span.

4. My critic says: "It is furthermore absolutely necessary to define the conditions under which a given sensational element is said to belong to the objective content; how long will it remain objective, and when will it pass over and become a part only of the subjective aspect?" I admit that there is justice in the criticism implied in this question, inasmuch as, in several places in my article, I spoke of 'the incoming content' as 'the object,' whereas I should have said the *focal* object, or the object par excellence—least subjective, because least identified with, and most discriminated from, the system or structure of the psychosis as a whole. I had supposed that my meaning would be clear from the statement given in the summary, which I now quote: "The psychosis considered only in its collective unity is subjective; considered only in its distributive plurality, it is an aggregate of objects; considered (as it must be) under both aspects simultaneously, it is a subject-perceiving-objects." Just as each side or element of a triangle is itself void of triangularity, and yet in relation to the other sides constitutes a triangle, so, I think, do the objects of a subject constitute, in their mutual relations or structure, that very subject whose objects they are. Nor do the inseparableness and interdependence of the distributive and collective aspects of a system interfere with their distinctness and their ability to vary at different rates. A change in the elements of a system produces normally a less—but sometimes a greater—change in the system as a whole. Some elements are always more closely identified with the structure of their system than others, and they consequently appear as more subjective; the longer a content has been present the more is it interwoven with the structure of the psychosis, and the more is it *ours;* the preexisting states of consciousness thus always appear as more subjective than the incoming. Again, feelings and emotions usually suffuse the entire psychosis in which they occur, and we can not regard them as we do objects in space, *i. e.,* as elements distinct from, and

relatively indifferent to, the structure of that psychosis; they are felt to be at once subjective and objective, or, as Rosmini puts it, 'the feeling and the felt are one'; the feeling of pain is a painful feeling, though the perception of red is not a red perception. Finally, in the case of a voluntary act we have an experience wholly subjective, for a true or free volition, in contradistinction to an impulse, is always a resultant of the entire system of present contents taken collectively—a unique expression of the Self or Ego, rather than of any one of its constituent objects. This is perhaps sufficient in answer to Doctor Holt's question as to the relation between the subjective and objective aspects of consciousness. I have dwelt on the point because it is the second of the two assumptions on which all the conclusions of my article depended. These assumptions were: I. The measurability of any time-period (physical or psychical) by the ratio of a change occurring in it to a standard change also occurring in it; such a ratio not requiring itself any duration, but being realizable at each point in the period. II. The identification of the subjective and objective poles of a psychosis with its collective and distributive aspects.

5. The last criticism of Doctor Holt is the most sweeping, though not, I think, the most important of all. He apparently feels that there really is no problem involved in the specious present, or that if there is, the Absolute Idealist has solved it by his 'timeless consciousness.' "Several moments," says Doctor Holt, "are in fact not present at any one moment. They are present altogether in consciousness, but not altogether in time, as the question paradoxically insinuates." But I did not insinuate that several moments were present at one moment in time (which would be paradoxical), but that they appeared to be present at one moment (which is a fact). It is a fact, that is, that at each and every moment of our waking life there is presented to us a specious segment of the just past. That fact is what we have to explain. The idealistic explanation, which Doctor Holt finds so convincing that he wonders at any one discussing the matter further, seems to me, I am ashamed to say, both unintelligible and irrelevant. To the question, 'at what time do we perceive together the several stages of a process?' the idealist replies, 'at no time.' Neither in a succession of many moments, nor at any one moment do we perceive, for example, a melody, but at the eternal or timeless moment. To which I must answer, that there is, so far as I can see, nothing timeless, or eternal, or in any way uncanny, about the moments when I perceive a melody. I perceive it, when I am in a given place, at a given time, which is precisely the time when the melody is being played. I am perceiving it as a whole (if it is brief enough) at each moment when it is sounding.

And my psychosis taken collectively, as a self or subject, is as much in time as are those of its elements which, at each moment, are perceived together as successive objects. And it is just because it is at *each and every* moment that we are conscious of time-segments, that I can see neither meaning nor propriety in saying that we are conscious of them timelessly, or at *no* moment.

W. P. MONTAGUE.

COLUMBIA UNIVERSITY.

REVIEWS AND ABSTRACTS OF LITERATURE

Leitfaden der Psychologie. THEODOR LIPPS. Leipzig, Verlag von Wilhelm Engelmann, 1903, 8vo, pp. 349.

The following lines are written, not with the view of furnishing a general criticism and estimate of Professor Lipps's new book on psychology, but rather with the view of calling attention to the ripened product of the life-work of a man whose influence in Germany is a power for good in the ethical quite as much as in the intellectual world. To Professor Lipps the word 'psychology' covers a multitude of things. I should be inclined to characterize the 'Leitfaden' as a system of philosophy in outline, with especial emphasis laid upon its psychological aspects. Certainly the last ten pages of the book, called a metaphysical appendix, can not be regarded as containing all the metaphysics in the book. In the body of the work we are treated to the author's views of the ultimate nature of the external world and of the mind, and are introduced to a philosophy of ethics and esthetics. The name to be applied to all this is, perhaps, of secondary importance; but the fact remains that we have here that far-reaching view of things that most of us are accustomed to call a philosophy rather than a psychology. We have glimpses of a system of ethics and esthetics, and the foundations of a philosophy of religion. In other words, we have a whole man, and not merely one department of his activity; which makes this book, to many of us, more interesting than, for example, the more bulky 'Esthetik' that has also recently seen the light.

The 'Leitfaden' was produced in a surprisingly short space of time —I believe within a period of two or three months—which rapidity of composition was made possible only by the fact that the material was already at hand. The process was a precipitation of views long in solution, and, in part, a gathering up of opinions embodied before in special monographs. There is some objection to this rapidity of composition. It is apt to result in a work which is clothed in the habitual forms of thought and expression peculiar to the author, and bears the clear imprint of his personality; but for that very reason the reader may find it more difficult to feel at home in the book. The more perfectly my old shoe fits me, the more unlikely it is that it will fit exactly the foot of my neighbor. For the market, shoes must be made for the 'average' man;

and the same is true of books; we must write them for those who have not been living in our world and thinking our thoughts. I can not but think that the 'Leitfaden' expects rather too much of its reader, and that it would have been well to write out some things much more at length.

But to the doctrine contained in the book. Professor Lipps regards it as the first duty of the psychologist to observe, analyze and describe the facts of consciousness. When this is done, he may go on to the discovery of uniformities, the formation of laws. This task he may approach in a twofold way. He may confine himself to facts of immediate experience, consciousness-contents as such, and develop a psychology of self-consciousness in the limited sense, a science for which there exist no 'real' objects, in the sense in which the word is used in physics—objects beyond and independent of consciousness. Or he may regard the consciousness-contents as phenomena, and refer them in thought to a real 'ground,' as one refers physical phenomena to atoms, ether-vibrations, etc. In the latter case one passes beyond the merely phenomenal, and one attains in the realm of mind to a world of realities analogous to the real external world as we conceive it to exist. Such a psychology develops into a logic and epistemology, an ethic and esthetic.

To Professor Lipps the psychology that contents itself with the observation and description of phenomena as such is an incomplete and unsatisfactory science. A psychology 'without a soul' can explain nothing. Mental phenomena as such are not causally connected with one another, and we first enter the field of causal connection and of explanation when we distinguish between mental phenomena or 'consciousness-contents' and the real psychical occurrences (*Vorgänge*) of which they are the phenomenal manifestation.

The consciousness-contents may be divided into four classes: (1) the self or ego, with its determinations, the feelings; (2) sensations and sense-perceptions, that is, simple and complex sensational contents, with the spatial and temporal forms according to which they are ordered; (3) the immediately experienced relations of the self or ego to objects, and the self-relations or relations in general; (4) the representatives of all of these in memory or imagination.

The presence of these contents in consciousness is the outward and visible sign of real occurrences taking place in the soul, and their appearances and disappearances may be explained as, not a result, but an indication of the relations of such occurrences to each other and to the soul itself. The acceptance of this distinction between 'Inhalt' and 'Vorgang' furnishes us with explanations; for example, with an explanation of all those facts which have led men to assume the existence of unconscious sensations and ideas. Each 'Vorgang' has a tendency to appropriate psychical force at the expense of every other. There is, therefore, a constant rivalry among them. One which has been highly successful and has triumphed over all others is 'apperceived,' that is to say, it becomes determinative of the changes taking place in the mental life, and the consciousness-content corresponding to it occupies, as we

express it, the centre of attention. But such a triumph can be but temporary. The psychic force must ebb, and the 'Vorgang' may fall to a point which may be called the 'threshold of consciousness,' *i. e.*, a point at which, but not below which, it may have an 'Inhalt' which represents it in consciousness. That which possesses force to a lower degree has no representative in consciousness, but it does not on that account cease to exist and to exert an influence. It may be called an *unconscious* sensation or idea, but one must be careful not to suppose that by such an expression is meant some sort of unconscious consciousness. It is not a content of consciousness at all, but a something assumed to explain, to make intelligible, facts of consciousness as they are directly revealed.

It is beyond the purpose of this paper to examine in detail Professor Lipps's account of the various classes of psychical phenomena. It is characterized by much shrewd observation,,and must be regarded as of value even by the psychologist who adheres to the 'soulless' doctrine which Professor Lipps disapproves. The question which interests me here is: How are we to conceive of this world of real 'Vorgänge' and the real self? We appear to be walking among *noumena;* how shall we conceive them? Do they really exist? and if so, in what senses of the word? What is a 'Vargang,' and in what terms shall it be thought? Is the real Self anything when we have abstracted from all consciousness-contents and their interrelations?

To these questions Professor Lipps furnishes an answer; but it is, I think, an answer which suggests a new question. To this new question I shall recur in a moment. A careful reading of the 'Leitfaden' makes it very clear that it would be doing the author an injustice to assume that his realities are *noumena* in the usual sense of the word. We find that the 'force' which the 'Vorgänge appropriate is not an occult some thing which must remain indescribable. It is measured by the degree to which certain experiences seem determinative of the course of our mental life. We are told that the substance or substrate, the real self, is a permanent real 'etwas' necessarily thought with the empirical self, given in consciousness, as its 'ground'; but we are also told that this statement contains nothing contradictory to Wundt's doctrine that the soul is 'das seelische Geschehen selbst.' This sentence, maintains Professor Lipps, can not mean that the soul is this or that single psychical occurrence, or the mere sum of such occurrences; but it must mean that it is the 'orderly connection of such occurrences in an individual' (p. 120). And this 'connection' (*Zusammenhang*) is, he holds, notwithstanding it is something new and peculiar, still a something only by an abstraction to be separated from the elements which enter into it.

But what are the occurrences that we thus unify, the 'Vorgänge'? We gain a better notion of what is meant by this word when we turn first to the realm of the material. What is 'das materielle Geschehen'? When a movement takes place, what is it that moves? We say, Matter. But what is this matter? It is a mere x, that contains in itself the possibility of motion. The orderly connection of material occurrences is nothing else than an orderly connection of possibilities. But what is

matter a possibility of? There is but one answer: It is a possibility of *phenomena,* of conscious experiences. We first reach actuality (*Wirklichkeiten*) when we are face to face with phenomena. Matter, in itself considered, is a mere limiting notion, an imaginary quantity (p. 337).

And the same is true of the psychical 'real.' "The 'real Self' is the nexus (*Zusammenhang*) of possibilities of a conscious life; and the single psychical occurrence (*Vorgang*) is a measure of the possibility that a definite conscious experience may come into being" (p. 338).

When we read such statements as these, the question to which I have referred above seems to present itself with a good deal of insistence. It is this question: If we are to begin and end in phenomena, in consciousness-contents, and accept them as the only actualities, regarding the 'realities' beyond them as mere 'possibilities,' may we not throughout limit ourselves to such consciousness-contents and the more or less complex relations between them? May we not look upon Professor Lipps's 'realities' as an hypostatization of such relations? They make their appearance in the early part of the book only to be absorbed and disappear in the latter part.

I suppose Professor Lipps would answer this question by saying that we can not get on without such realities, and that the psychologist only follows the lead of the physicist in making use of such conceptions. The question is a large one, and can not adequately be discussed within the limits of such an article as this. I have desired to present Professor Lipps's position, not to criticize it. But whether one sympathizes wholly with the position or does not, one must admit that the doctrine is developed in the 'Leitfaden' with admirable thoroughness. And one can not fail to note with interest the steps by which it is made to work out into a realm of real selves, standing to each other in a system of ethical relations, and supported by a 'World-self' which appears in each, and which, yet, is not to be confounded with any or all of its parts. Above all, one will be impressed by the elevated ethical and religious feeling which pervades the work, and which seems to make clear the source of the moral courage which has, for years past, enabled the author quietly to take his place upon the unpopular side of questions which have stirred public feeling; a courage which has had a quickening effect upon many in the city which is the scene of his labors.

We all have an intellectual ancestry of some sort. A reading of his book inclines one to think that Professor Lipps has inherited much both from Herbart and from Hegel. But as many roads lead to Rome, so one and the same outlook upon life may be attained by men who travel upon very different paths. I venture to think that some of those who regard Herbart as a delusion, and to whom Hegel is a synonym for all that is loose and vague in human reasonings, will, nevertheless, feel themselves in rather a close sympathy with the 'Weltanschauung' in which Professor Lipps's reasonings terminate. The moral of which reflection seems to be that philosophers should eschew dogmatism, and should keep their eyes well open to truths which historical accident has clothed in a strange or, to them, unattractive dress.

GEORGE STUART FULLERTON.

MUNICH.

The Meaning of the Psychical from the Point of View of the Functional Psychology. H. HEATH BAWDEN. *Philosophical Review,* May, 1904, pp. 298–319.

This article is a revision in part of the paper read by Professor Bawden before the American Philosophical Association, at the Princeton meeting. It is a noteworthy addition to his previous discussions of the functional psychology in the *Philosophical Review* and this JOURNAL.[1] Its purpose is to consider the 'meaning of the psychical in relation to that process of tension in experience which we have defined as the condition of consciousness.' To this end Professor Bawden points out, in the first part of his article, the need of a reconstruction of the concept of the psychical in view of the important recent advances in psychological science. These have involved a substitution of the genetic and functional mode of viewing experience for the analytic and structural. The validity of this latter mode is not denied, but is regarded methodologically as instrumental to the functional view.

From the functional standpoint, experience is viewed as a process, an action, which 'is as much action when it is conscious as when it is unconscious, but the conditions of conscious action are different from the conditions of unconscious action.' The conditions of conscious action are: 'the law of tension or obstruction in activity, and the law of habit or facilitation in coördination.' The law of tension states that acts are consciously performed only when there arises stress in adjustment and is illustrated by the whole of psychophysics. "The whole study of sensation in modern structural psychology, especially in psychophysics, is really a technical investigation of the nature and limits of this tension. Genetic psychology is a study of the types of experience within which this tension arises and of the changes which one type of experience (such as instinct) undergoes in the process of emergence of consciousness (in impulse), and its transformation into another type of experience (habit). The so-called functional psychology is simply an attempt to relate both these forms of psychological investigation to the process of reconstruction of experience as a whole; it interprets structure in terms of function, and function in terms of the genesis and growth of structure." "We simply have one name (the term 'consciousness' or 'psychical') for describing action when it is tensional, and another name (the term 'habits' or 'physical') when it is relatively stable." The distinction between the physical and the psychical is only practical. The data of psychology become thus as objective as the data of any other science. To regard them as subjective involves the turning of a practical into an absolute distinction.

Since the distinction between the physical and the psychical is only functional, Professor Bawden contends, in the second part of his article, that the psychical can not properly be regarded as exclusively individual. The 'unique, inner, immediate, direct, unsharable experience is, after all,

[1] *Philosophical Review,* September, 1902, and May, 1903. JOURNAL OF PHILOSOPHY, PSYCHOLOGY AND SCIENTIFIC METHODS, February 4, 1904.

arrived at as inferentially as any other experience.' Consciousness is essentially social in character, and 'society is an organism in the same sense that the human body is an organism.' The individual simply represents a fragment of the universe, is an organ of the greater organism, society. His consciousness is simply the process of the universe when and where it is tensional. It is only the focus of this tension which can be called unique and unsharable. But even so, its uniqueness and unsharability are the same in character as those of any other individuated object in the universe. Indeed one may claim that the center of stress and strain, when the universe is tensional, passes out of the individual into the consciousness of others, as in the case of a person who is ill. "*He* really may be suffering very little; the focal point may be in the consciousness of his friends." Consciousness "is simply the one world we know in its process of reconstruction. The individual represents a node or nisus of energies." The individual consciousness tends normally to exhibit its essentially social character, to bring to a focus the greatest range of social influences. "Extreme individuality or uniqueness we treat as a form of insanity."

The third part of the article is a criticism of the views of Professor Royce, Professor C. A. Strong and Dr. Morton Prince. As a result of this criticism Professor Bawden suggests two conclusions: first, that consciousness is to be correlated with nothing less than a complete organic circuit, involving the whole context of external nature as truly as the internal mechanism of the nervous system; second, that the condition of consciousness is a certain tension within this system or organic circuit, and that when this is absent . . . the psychical and the physical merge, consciousness vanishes." The article is a most interesting and suggestive attempt to break down that traditional view of consciousness which regards it as a collection of mental states set over against an external and radically different reality which these states can only symbolize or represent.

FREDERICK J. E. WOODBRIDGE.
COLUMBIA UNIVERSITY.

Historical Synthesis. FRED MORROW FLING. *American Historical Review,* October, 1903, Vol. IX., No. 1, pp. 1–22.

This article, appearing in a historical review, may well have escaped the attention from our readers that it deserves. Professor Fling gives a very clear and fairly complete summary of the controversy as to the distinction between history and natural science. Many have agreed with Buckle that historical synthesis can mean nothing but the discovery of the laws of human societies. On the other hand many have contended that history has a synthesis peculiar to itself, in which, instead of the discovery of laws, or of what is general in things or events, emphasis is laid on their uniqueness. But there was wanting any statement of what the historian positively attempts in this synthesis, until the appearance of H. Rickert's 'Die Grenzen der Natur-wissenschaftlichen Begriffsbildung,' in 1902. Rickert's statement is the main theme of Professor Fling's article.

In general, the historian aims to record the combinations of individuals, not into a mere class, but ino a more comprehensive individual, as in the case of nations, or such movements as the Reformation. Luther, for example, is important as a member of the movement of the Reformation, and therefore he and his work are historical individuals, as concrete, unique facts. In such 'teleological' combinations, "the smaller unity is related to the larger one until the limits of the visible universe are reached, for history deals with the whole of reality." As opposed to Münsterberg, Rickert retains the temporal character of history, and shows that causal connection is introduced in the interest of the continuity of the narrative. But in history the cause need not, as in mechanics, be equal to the effect.

Professor Fling believes that Rickert has fully justified the claim of history to a method of its own, distinct from that of the natural sciences, and more than mere 'microscopical research'; that he has grounded the logic of historic synthesis, of history as a science.

But it must be admitted that the concept of individuality, on which this logic is based is inadequately defined for that purpose in terms of unity and uniqueness. Because of this, when Professor Fling would give the bare form of the 'absolute historical concept,' he names one character after another, to the extent of nearly half a page, without any unitary conception, to correspond to the definite goal of natural science, the discovery of law. I have ventured to suggest elsewhere that the concept of *agent* is adequate to indicate the goal of the historian, and that *action* is the content of history. These terms, I think, imply the several characters that have, from time to time, been noted as essential to history.

Two such characters, at least, Professor Fling seems to slight. History is that past process which has brought about a present fact, known as the evidence. The historian searches for the thing that has effected that present, for the agent, that is, whose action, then, is that past reality, the content of the history. Agent and action express the fact that the ground of that past process must be the character of the thing that brought about the present evidence. Hence, we secure that property of freedom which Hegel noted as distinguishing the individuals of history; whereas those of natural science proper (at least, according to Rickert's logic), that is, the atoms, are determined by the totality of circumstances, having no nature of their own save a quantity, be it mass or energy. It is true that, if we exclude the world-spirit of Hegel, none of the agents of history are in fact altogether free; nor does history so present them. But it starts by conceiving them as active and notes further in what ways they are furthered or hindered by their relations to other agents.

Professor Fling does scant justice, I think, to the contention of Droysen and Münsterberg, that history above all informs us of the relation of our volitions to those of others, that it tells us of the 'moral partnerships' we have or may have. History as the search for and description of agents and their action tells us what manner of agents we are, and into what actions we enter or may enter. As action is a temporal term

its use saves us from the paradox propounded by Münsterberg of a *timeless* history, without slighting the essential truth of his position. Further, action is a term wide enough to include such agents as the earth, the solar system, or a nebula, to whose course in time the term history has been applied in common practice. We should return to Hobbes' distinction between history as a register of fact, and science as knowledge of consequences or laws.

Professor Leighton in the second number of this JOURNAL insisted that Rickert makes too fixed a distinction between history and natural science. And Professor Fling abates nothing of that fixedness. It would, I think, be in a measure obviated, if we were to describe history as dealing first and last with genuine agents; whereas, in natural science, the agency resides in the indefinite 'totality of circumstances' whose consent is necessary to the movements of atoms.

It seems to be owing to his indefinite conception of individuality, and to his still somewhat negative account of the purpose of the historian that Rickert contemplates the possibility of grasping human civilization as a member of the solar system (401). Professor Fling seems to consider that result certain. Yet nothing seems more certain than that the progress of one is to be absolutely fatal to the other; and if two individuals can not act towards one end they can not be conceived as one agent; nor can one history be written of them. It seems that history must leave us with a final multiplicity of agents.

Professor Fling's article is, I believe, the only summary of this important controversy that has appeared in this country, and we owe him many thanks for his analysis of the difficulty and of the solution proposed.

PERCY HUGHES.

COLUMBIA UNIVERSITY.

Nota psicologica intorno al significato dell' Argomento di Sant' Anselmo d'Aosta. R. NAZZARI. *Rivista Filosofica,* March–April, 1904, pp. 183–197.

The purpose of the author is not to discuss the logical validity of the ontological argument, but to point out that Anselm is better understood as the spokesman of a spiritual attitude than as the maker of a faulty syllogism, and to examine the psychological basis of the argument itself.

The author regards Anselm's demonstration as an original thought, not to be accounted for by previous discussions. It appear 'come affatto isolata e indipendente.'

Signore Nazzari declines to admit that the ontological argument has a purely practical character, that it is an instrument of conversion—suited to bring to the unbeliever the same conviction which the believer possesses as faith. The man who does not assume the existence of God can not be reached by arguments based upon a revelation and its consequences. Therefore, some have thought, Anselm invented the ontological argument to prove what was, to his own mind, quite certain without it.

Signore Nazzari hints, but does not seriously argue, that Anselm wished to fortify his own faith. The burden of proof is certainly upon him who

claims that Anselm's faith needed any dialectical prop. The sincerity of his 'regulative' point of view ('*Credo ut intelligam*'), need not be doubted.

Signore Nazzari is sure that Anselm was far from thinking he could pass from idea to existence with merely conceptual resources. "St. Anselm surely could not fail to observe that the various mental combinations of perceptions and representations may very well correspond to nothing objective. . . . Thought, however, ascending from particular to general, along the way of abstraction, reaches a point where it is obliged to stop, beyond which it can not advance (at least according to the Scholastics). There is, therefore, an ample region within which thought can be freely active without ever claiming that its concepts represent objective facts. But this is not true of the two limiting terms, sense-perception and the supreme being beyond which thought can not ascend (*quod maius cogitari nequit*), which can not fail to exist. Otherwise, complete skepticism would be justified. We can not doubt the existence of the perceived object, but if this is a real *datum,* the greatest possible being has, so to speak, a superior right to exist, because it ought to exist, since it has the character of necessity, or at least must have seemed to have it to the philosopher, because of an unjustified transition from logical (*concetti teoretici*) to moral concepts."

The confidence in God's existence rests thus upon a *sentimento,* and the ontological argument is the expression not of a practical purpose (conversion) nor of a purely logical interest, but of this *sentimento.* That which is bound to exist is the *quo maius,* the infinite, and its guarantee lies in the fact that to the imagination a thing seems greater if it exists than if it does not, and this increase includes an increase of value. Signora Nazzari thinks that this relation of existence to the estimate of worth can be verified in our own experience. When a surprising tale is found unexpectedly to be true, it seems to be suddenly possessed of a heightened value, due to the increased interest with which we regard it. The tale seems richer and more important. Given thus the instinctive feeling that existence does make a difference to the content of the object and to its value, the ontological argument is not improved as logic, but its vitality seems to be heightened.

The first step in constructing the argument is the substitution of '*id quo maius cogitari non potest*' for God. That the *quo maius* is equivalent to God and can be substituted for His name in a syllogism was one of the characteristic convictions of early mediaeval thought, especially among pious minds inclined to Realism. And Anselm was an extreme realist.

The syllogism in which Signore Nazzari states the ontological argument is as follows:

If the greatest possible being does not exist in reality, it does not exist conceptually.

It does exist conceptually.

It exists therefore in reality.

One may regret that Signore Nazzari does not criticize the syllogism

in greater detail. He rejects the ontological argument as a whole and hints that his objection is rather against the minor premise than the major. Anselm's critic, Gaunilo, denies the minor as well as the major premise. Gaunilo held that the *quo maius* had neither genus nor differentia, and therefore did not exist even in idea, and with this Signore Nazzari appears to agree.

W. T. Bush.

Brooklyn, N. Y.

JOURNALS AND NEW BOOKS

ARCHIV FÜR SYSTEMATISCHE PHILOSOPHIE, May, 1904. Band X., Heft 2. *Psychologische oder kritische Begründung der Ästhetik?* (pp. 131–159): J. Cohn. – It is possible to establish critically an empirical universality for correct esthetic appreciations, but psychology can not furnish the basis for such categorical evaluations. In natural beauty, we should start from the behavior of the subject, in art from the nature of the object, to gain evidence of its esthetic character. *Sulla quistione del Genio* (pp. 160–165): V. Allara. – Largely a criticism of Lombroso's work. *Die Eigenart des Religiösen Lebens und seiner Gewissheit* (pp. 166–229): D. A. Müller. – Religion is a universal disposition existing in every healthy man. Religious life is always a property of the individual heart which is not affected by occurrences, by historical presentations or by 'Weltanschauungen.' Atheism has and is religion. Religion's essential nature can only be sought in the perfect being of God. It is fashioned alike in the simple man and in the scientist. Education can neither give religion nor take it away. *Jahresbericht. La philosophie francaise* (pp. 233–241): C. Bos. – Reviews of: 'Psychologie du Rire,' par L. Dugas; and 'La Philosophie de Fichte,' par Xavier Leon. *Philosophy in the United Kingdom for 1902* (pp. 242–264): G. E. Moore. – 'The Scope and Relations of Philosophy,' by H. Sidgwick is declared to be most important, but disappointing in its account of the relation of Philosophy to Psychology. Its insistence on the worthlessness of the historic method of attacking philosophic problems is commended. No other books calls for notice save 'Personal Idealism,' which is interesting chiefly because of the intentions of its contributors. Mr. Schiller's contribution thereto is utterly worthless.

NOTES AND NEWS

The University of Wisconsin celebrated this year its Fiftieth Commencement. The degree of LL.D. was conferred upon Professor John Dewey, of Columbia University, and upon Professor E. B. Titchener, of Cornell University.

Doctor F. C. Sharp, assistant professor of philosophy at the University of Wisconsin, has been advanced to an associate professorship.

Amherst College has conferred the degree of LL.D. upon Professor James H. Tufts, head of the department of philosophy at the University of Chicago.

THE Station for Experimental Evolution recently established by the Carnegie Institution under its Department of Experimental Biology was formally opened at Cold Spring Harbor, Long Island, on the afternoon of Saturday, June 11. Representative students of plant and animal biology from many universities and colleges and the directors and other officers of the principal scientific institutions of Greater New York were among the invited guests, at whose disposal a special parlor car was placed by the courtesy of the Long Island Railroad. After a luncheon served at the residence of the Director, the formal exercises were held in the laboratory building of the Brooklyn Institute of Arts and Sciences. An introductory address was made by Director C. B. Davenport, who has resigned his associate professorship of zoology in the University of Chicago to take charge of the station. An historical address followed, by Mr. Walter R. T. Jones, of the Wamepex Society, who, in the absence of Mr. Townsend Jones, also presented the papers making over to the Carnegie Institution, for the use of the station, a fifty years' lease of land owned by the society. Dr. John S. Billings, as chairman of the executive committee of the Carnegie Institution, made the address of acceptance, in which he indicated the far-reaching significance of the studies proposed by the station, and their possible applications to philosophy and psychology, sociology and economics. Dr. Franklin W. Hooper followed with an address of welcome on behalf of the Brooklyn Institute. The scientific address, on 'The Aims of Experimental Evolution,' was made by Hugo de Vries, professor in the University and director of the Botanical Gardens at Amsterdam, eminent for original contributions to our knowledge of vegetable physiology and of the laws of heredity and evolution. As the author of 'Die Mutationstheorie,' the most important contribution to the literature of organic evolution since the appearance of Darwin's 'Origin of Species,' Professor de Vries was peculiarly qualified to speak with authority on the subject of his address. The leading problems of variation, especially susceptible of statistical investigation, and of mutation and hereditary transmission, requiring prolonged experimentation, were sketched in summary, and the methods of attacking them indicated. The first building of the station is in process of erection. It is to be 65 x 35 feet, of brick covered with stucco, two and one half stories high, and will be used as an administrative building and for certain breeding experiments. Experimental gardens have also been laid out, and some simple experiments with plants are already under way. Director Davenport will be aided by a permanent staff, consisting of Doctor Shull, botanist; Mr. Lutz, in charge of certain biometric investigations, and Miss A. M. Lutz, preparator, cytologist and secretary of the station, all formerly of the University of Chicago. There will be in addition a class of associates, including investigators in temporary residence at the station and others carrying on researches in experimental evolution under the auspices of the Carnegie Institution or the director of the station. The results of such investigations will be published by the Carnegie Institution.